**Directions:** Each group may complete classwork/homework 60 at their own pace. Each student is responsible for showing their own work in their own geometry notebook for all problems. “At your own pace” means that your group can choose what to do for homework and what to do in class. Keep in mind that every single problem on the classwork needs to by completed, in your notebook, by Thursday February 16th, and that you should be working on the classwork/homework in class everyday until it is due. If your group is moving at a faster pace and you feel that you will finish early, please inform an instructor. Below is a table of “check-points” and suggested due-dates to stay on pace. Each time your group reaches a “check-point” you must call over an instructor to sign-off and confirm you have completed the “check-point”.

**Expectations:**

CW60/HW60: Simplifying, Multiplying, & Rationalizing

**Geometry**

Due: Thursday, February 16th

* Section 0, Section 1, Section 2, and Section 3 are completed by Thursday February 16th
* Problems are copied and all work is shown in specified Geometry notebook.
* All “check-point’s” in the table below have been initialed/signed by an instructor
* All notes, in this font, are copied into notebook.
* You have materials from section 0-section 3 to work on in class (you may NOT complete all work at home and have nothing to work on in class.)

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| **Section** | ***Suggested completion date*** | **Actual completion date** | **Teacher Signature** |
| Section 0 and Section 1 | By Tuesday, February 14th |  |  |
| Section 2/Start Section 3 | By Wednesday, Feb 15th |  |  |
| Section 3 | By Thursday, Feb 16th |  |  |

***COMPLETE IN NOTEBOOK! SHOW ALL WORK IN NOTEBOOK!***  
  
Section 0: Review

CW60/HW60: Simplifying, Multiplying, & Rationalizing

**Geometry**

Due: Thursday, February 16th

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| **Directions: Simplify the radicals.** | | | |
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Section 1: Simplifying Radicals with Whole numbers AND variables

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| **Directions: Simplify the radicals.** | | | |
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Section 2: Multiplying Radicals

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| Copy the note below into your notebook: **How to Multiply Radicals**  1)Multiply the coefficients and the radicands separately (similar to “like terms” from prior knowledge)  2)Simplify the radical at the end.  For example, consider   , Multiply "3 and 4" since they are not under the radical, and multiply "2 and 5" since they are both under the radical   The cannot be simplified any more, so  is the final answer. | | | |
| Directions: Simply the radicals. | | | |
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Section 3: Rationalizing Denominators with Radicals

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| Directions: Read and Annotate the section below on *why* we rationalize the denominator  Why do we rationalize the denominator?  The most important reason, usually is "Because your teacher told you!" There is nothing mathematically wrong with something like or with any fraction that has a radical in its denominator. Just like in elementary school when you were probably told that fractions like were 'bad' (or 'improper' in this case), having a radical in the denominator is not actually mathematically 'wrong'. A historical reason: Before we had calculators that could compute radicals, we had to to calculate the value of radicals by hand, and it's much easier to do that when the radical is in the numerator.  Nowadays: There are two reasons why we still rationalize the denominator. Since most types of expressions and equations have a standard form, such a form was needed for rational expressions with radicals. And since we had historically rationalized the denominators due to a lack of calculators, this form became the standard one.  The good news: it's usually not very difficult to rationalize the denominator, and you can always double check your work with our calculator. | | | |
| Directions: Copy the notes below into your notebook…  In order to rationalize the denominator, you must multiply the numerator and denominator of a fraction by some radical that will make the ‘radical’ in the denominator go away. Below is some background knowledge that you must remember in order to be able to understand the steps we are going to use.   **Multiplying a fraction by 1**  Remember that you can create an equivalent fraction by multiplying your original fraction ( in the example below) by 1, , or by , or by any form of 1 as a fraction. Example: . Multiplying by creates an equivalent fraction because notice that can be reduced to .  **Multiplying Radicals**  The product of two square roots is the square root of the products (in other words, you can multiply two square roots and put them under the same radical as shown in the example). Example.  For more help and examples, visit: http://bit.ly/2kX29N5 | | | |
| Directions: Rationalize the denominator of the fractions below. | | | |
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